United States
Environmental Protection Agency

Air and Radiation
Global Programs Division
6205J

Substitute Sterilants Under SNAP as of October 1, 2004

SNAP Information: http://www.epa.gov/ozone/snap

EPA has created the Significant New Alternatives Policy (SNAP) Program under section 612 of the Clean Air Act Amendments. SNAP evaluates alternatives to ozone-depleting substances. Substitutes are reviewed on the basis of ozone depletion potential, global warming potential, toxicity, flammability, and exposure potential as described in the March 18, 1994 final SNAP rule (59 FR 13044). Lists of acceptable and unacceptable substitutes will be updated periodically in the Federal Register. The following SNAP notices and subsequent final rules are included in this list: August 26, 1994 (59 FR 44240), January 13, 1995 (60 FR 3318), June 13, 1995 (60 FR 31092), July 28, 1995 (60 FR 38729), February 8, 1996 (61 FR 4736), May 22, 1996 (61 FR 25585), September 5, 1996 (61 FR 47012), October 16, 1996 (61 FR 54030), March 10, 1997 (62 FR 10700), June 3, 1997 (62 FR 30275) , February 24, 1998 (63 FR 9151), May 22, 1998 (63 FR 28251), January 26, 1999 (64 FR 3861), April 28, 1999 (64 FR 22981), June 8, 1999 (64 FR 30410), and October 1, 2004 (69 FR 58903).

Acceptable Substitutes for Sterilants under the Significant New Alternatives Policy (SNAP) Program as of October 1, 2004

Substitute	Application Being Replaced	Comments
CO_2 / EtO	EtO / CFC-12 Blend (12/88)	CO_2/EtO blends can serve as drop-in replacements to 12/88 in some but not in all existing equipment because they require a higher operating pressure. As a HAP, use of EtO must comply with Title III of the CAA. This agent is FIFRA registered.
HCFC-124 / EtO	EtO / CFC-12 Blend (12/88)	HCFC-124 is an ozone depleting substance; it should be used to sterilize only that equipment that cannot be sterilized using other alternatives such as steam or CO_2/EtO blends. As a HAP, use of EtO must comply with Title III of the CAA. This agent is FIFRA registered.
[HCFC Blend] A / EtO	EtO / CFC-12 Blend (12/88)	This blend contains HCFC-124, an ozone depleting substance; it should be use to sterilize only that equipment that cannot be sterilized using other alternatives such as steam or CO_2/EtO blends. As a HAP, use of EtO must comply with Title III of the CAA. This agent is FIFRA Registered.
IoGas™ Sterilant Blend 1 (blend of CF_{3I}/CO_2/EtO)	EtO / CFC-12 Blend (12/88); HCFC-124/EtO; HCFC Blend A (HCFC-124 and HCFC-22)/EtO	As a HAP, use of EtO must comply with Title III of the CAA. FIFRA registration of this agent is pending.
IoGas™ Sterilant Blend 3 (blend of CF_{3I}/CO_2/EtO)	EtO / CFC-12 Blend (12/88); HCFC-124/EtO; HCFC Blend A (HCFC-124 and HCFC-22)/EtO	As a HAP, use of EtO must comply with Title III of the CAA. FIFRA registration of this agent is pending.

Acceptable Substitutes for Sterilants under the Significant New Alternatives Policy (SNAP) Program as of October 1, 2004

Substitute	Application Being Replaced	Comments
IoGas™ Sterilant Blend 6 (blend of CF_{3I}/CO_2/EtO)	EtO / CFC-12 Blend (12/88); HCFC-124/EtO; HCFC Blend A (HCFC-124 and HCFC-22)/EtO	As a HAP, use of EtO must comply with Title III of the CAA. FIFRA registration of this agent is pending.
Pure EtO	EtO / CFC-12 Blend (12/88)	EtO is a toxic, carcinogenic substance and is considered a hazardous air pollutant. Potential exposures of the general population to EtO releases can be limited either through the use of catalytic converters which convert waste EtO into CO_2 and water, or through the use of acid water scrubbers which convert waste EtO into ethylene glycol. Must be used in accordance with manufacturer recommendations to address flammability concerns. Must be used in accordance with OSHA standards to limit occupational exposures. As a HAP, use of EtO must comply with Title III of the CAA.
Peroxyacetic Acid / Hydrogen Peroxide Gas Plasma Systems	EtO / CFC-12 Blend (12/88)	
Hydrogen Peroxide Gas Plasma Systems	EtO / CFC-12 Blend (12/88)	
Steam	EtO / CFC-12 Blend (12/88)	Applicable only to devices resistant to heat and moisture.